

Abstract

A floor care appliance is provided with a motor-fan assembly that includes a diffuser to improve efficiency but also reduces any resultant noise generated. The diffuser is disc shaped and has a plurality of equi-distant spaced vanes around the periphery. The vanes improve performance by converting air velocity into static pressure rise. The vanes also reduce noise by making the flow more uniform. A periphery of radially extending return vanes are arranged circumferentially on one side of the disc. The return vanes remove swirl and improve performance before directing the air through the interior of the motor for cooling.